Message

From: Fernandez, Antonio [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D55116A355544048B06C0AA85F17AA7C-FERNANDEZ, ANTONIO]
Sent: 4/2/2013 2:46:17 PM
To: Nam, Ed [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A2653f1ddd59470688ba557dd84d9690-Nam, Ed]; GHG Technology Info [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0e445e0b791149cd83114d227b6a3375-GHG Technology Info]
Subject: RE: More efficient gas engines gain on diesels | Detroit News -

This is a comment from Hyundai who is not in the diesel market in the US and has had some recent "challenges" with their reported gasoline FE.

The difference not mentioned is that diesels do not experience the real world shortfall that almost all hybrids experience (cold weather , A/C usage, high speed driving, heavier loads). This is observed in the 5-cycle data comparing diesels to hybrids. Also, with the exception of the exhaust aftertreatment (which at current volumes and designs is costly), the cost of future high specific output gasoline engine (with high cylinder pressures and GDI) is likely approaching diesels. BMW announced that their new gasoline and diesel engines will share many key components so similar cost.

We should follow the future reported FE of the two Chevy Cruze engines on mympg.gov to see what the real world is reporting.

Tony

-----Original Message-----
From: Nam, Ed
Sent: Tuesday, April 02, 2013 10:22 AM
To: GHG Technology Info
Subject: FW: More efficient gas engines gain on diesels | Detroit News -

An interesting article about diesels.
Note Hyundai's comment on cost of HEVs being lower than diesels. (I can't seem to format the text below so I copied the relevant text just below:

" And on a cost-basis, hybrids trump diesels, too. John Krafcik, president and CEO of Hyundai, said the added cost to the consumer of hybridization is about $1,500, compared to $5,000 for diesel. "

" Take for instance the new Chevrolet Cruze turbo diesel. GM says the car will get 42 highway miles per gallon – exactly the same fuel efficiency of the gasoline-powered Chevrolet Cruze Eco, which costs about $4,000 less than the diesel. "
-----Original Message-----
From: Cohen, Justin
Sent: Monday, April 01, 2013 8:43 AM
To: Nam, Ed; Moran, Robin; Alson, Jeff
Cc: Charmley, William; Bunker, Byron; Simon, Karl; Stewart, Lori; Wehrly, Linc
Subject: More efficient gas engines gain on diesels | Detroit News -

More efficient gas engines gain on diesels | Detroit News -

General Motors and Chrysler are adding diesels to their U.S. car and truck lineups, but traditional gasoline engines and hybrids are becoming so fuel-efficient that American consumers have fewer financial and performance reasons to buy them.

Diesel-powered cars are losing ground to advanced gasoline engines: They cost thousands of dollars more than comparable models with gas engines. They no longer have nearly the advantage in pulling power, at least in passenger cars. They don't deliver significantly better fuel economy. And diesel fuel costs about 36 cents a gallon more than regular unleaded.

Improvements in gasoline engines have closed the gaps in fuel efficiency and pulling power, said Allen Schaeffer, executive director of the nonprofit Diesel Technology Forum. "There is quite a competitive landscape today, compared to what it was five or 10 years ago," he said.

While GM and Chrysler have decided to join European brands in offering more diesels, Ford Motor Co., Toyota and Hyundai have decided to stick with increasingly fuel-efficient gas engines and hybrids. All automakers are under pressure to squeeze more miles per gallon to meet federal fuel efficiency standards.

"There's no doubt the advancement in gasoline technology has improved and that has, in some respect, slowed down diesel options from OEMs," Tony Schultz, vice president of the Americas for technology supplier Honeywell International Inc.'s Turbo Technologies, said in a telephone interview.

And on a cost-basis, hybrids trump diesels, too. John Krafcik, president and CEO of Hyundai, said the added cost to the consumer of hybridization is about $1,500, compared to $5,000 for diesel.

"When we ask if consumers are willing to pay that, they ask, 'What are you smoking?'" he said. "We all have great diesel engines available to us, but gasoline engines are growing."

Last year alone, U.S. sales of diesel vehicles rose 25 percent. But as a percentage of total industry sales, diesels made up only 2.7 percent of new-car purchases, said Edmunds.com. Hybrid vehicles – at about 3 percent of industry sales – outsold diesels in 2012.

Some analysts project growth will be much slower and limited to self-proclaimed diesel fans. And some automakers, like General Motors Co., have decided to take a methodical approach to diesel car introductions in the U.S. market.

Diesels for decades have been known for having better torque, or pulling power, than gas engines. But that advantage is dwindling.

Ford Motor Co.'s new 1-liter EcoBoost engine, a marriage of turbocharging, direct-injection and twin independent variable-camshaft timing, delivers 147 foot-pounds of torque. On a per-liter basis, the engine beats any other mass-produced car available in the U.S., and at a premium of about $1,000, compared to several thousand dollars for a diesel engine with comparable attributes.

Other gas engines will see torque improvements in coming years: GM's new 3.6-liter twin-turbo V-6 will have its torque boosted from 353 foot-pounds to 430 in the new Cadillac CTS sedan that's expected to hit showrooms later this year. And GM's turbocharged 1.4-liter is significantly more efficient than a comparable 2.2-liter from four years ago.

Diesels have also had an advantage in fuel efficiency, but that, too – at least by Environmental Protection Agency standards – is being challenged by gas engines.

Take for instance the new Chevrolet Cruze turbo diesel. GM says the car will get 42 highway miles per gallon – exactly the same fuel efficiency of the gasoline-powered Chevrolet Cruze Eco, which costs about $4,000 less than the diesel.

The diesel will likely get better real-world fuel efficiency, as most diesels do, but the upfront expense will extend greatly the time it takes to recover the cost. Depending on fuel costs, some consumers may never recover the cost.

Honeywell's Schultz admits that diesels, at least initially, are not the best value proposition.

"The math is not a great payback," he said. "But when you take into account the residual, there is some added value there."

Data from Kelley Blue Book show the residual value of diesel vehicles is about 4.6 percentage points higher than gas cars – partly because of higher base prices on diesels – and in all instances have higher resale values.

"In spite of the resale value and fuel economy advantages, consumers in the U.S. have been slow to accept this different form of powertrain and as a result, there are not a lot of diesel vehicles to choose from," said Eric Ibarra, KBB's director of residual values.

The Diesel Technology Forum says 23 diesel cars, SUVs and pickups are offered for sale in the U.S. It projects that number will grow to 54 by 2017.

Automotive forecaster ALG expects diesels to account for 5 percent of new-vehicle sales within three years, and auto supplier Robert Bosch predicts diesels will comprise 10 percent of the U.S. market by 2020.

Ford and GM sell plenty of diesel-powered cars in Europe. Diesels make up half of all new-car sales there. But even in Europe, their popularity there is "waning," Krafcik said. If U.S. market demand for diesels increases, Ford and GM could quickly make production adjustments to boost output.

Mark Fields, Ford's chief operating officer, touted Ford's manufacturing flexibility during a recent speech at the University of Michigan's Ross School of Business.

"If we see diesels start to take off here in the U.S., we can react very quickly," he said.

Some have said that by 2018, emissions standards in Europe and the United States will become close enough to allow for more economical diesel production.

But Jim Hall, analyst at 2953 Analytics, says even that won't significantly close the cost gap between diesel and gas.

"A diesel engine will always be more expensive than a gas engine built in similar quantities," Hall said in a telephone interview. "Higher volume doesn't make it less expensive to build than a gas engine."